SUPPLEMENTAL ENVIRONMENTAL ASSESSMENT FOR THE DEMOLITION OF BUILDINGS 134, 3433, 3714, 5100, 5105, 5107, AND 8978 ON REDSTONE ARSENAL, ALABAMA

U.S. ARMY AVIATION AND MISSILE COMMAND
REDSTONE ARSENAL, ALABAMA

SEPTEMBER 20, 1999

September 20, 1999

FINDING OF NO SIGNIFICANT IMPACT (FNSI)
SUPPLEMENTAL ENVIRONMENTAL ASSESSMENT
FOR THE DEMOLITION OF BUILDINGS
134, 3433, 3714, 5100, 5105, 5107, AND 8978 ON
REDSTONE ARSENAL, AL

PROPOSED ACTION: The Army proposes to demolish seven buildings (or ancillary structures) located on Redstone Arsenal (RSA), Alabama. Some of these buildings have been abandoned for some time and are considered to be in excess of Army needs. Many of these buildings contain asbestos-containing material (ACM) and lead-based paint, and have outdated plumbing, electrical, and HVAC (heating, ventilation, and air conditioning) systems that would make renovation of the buildings cost prohibitive. The buildings would be razed by conventional demolition methods.

These structures were identified for demolition subsequent to the publication in February 1998 of the *Environmental Assessment for the Demolition of 35 Buildings and Ancillary Structures on Redstone Arsenal, Alabama* (AMCOM, 1998). Therefore, this document will be a supplement to and tiered from that document.

BACKGROUND: Redstone Arsenal is located in Madison County, southwest and adjacent to the City of Huntsville, Alabama. The Arsenal occupies approximately 38,000 acres of land and employs approximately 21,500 government and contractor personnel. Approximately 2,000 buildings are currently located on RSA. The Army has identified seven buildings for demolition that have, in the past, been used for various administrative, housing, and support facility needs. All of the buildings identified for demolition are considered excess to current military needs.

PURPOSE OF THE PROPOSED ACTION: The purpose of the proposed building and structure demolitions is to remove buildings considered to be in excess of current Army needs and to remove potential health and safety hazards posed by the presence of ACM and lead-based paint. The buildings are considered to be unsuitable for renovation. This Proposed Action would return the areas currently occupied by these buildings to a more useable status.

NEED FOR THE PROPOSED ACTION: Redstone Arsenal requires ample area to accommodate new development and growth for installation needs and mission requirements, and an obligation to provide a safe environment for installation personnel. Removal of the buildings identified in the Proposed Action would allow room for the reutilization of these locations in some of the prime building locations

within the Arsenal. If the areas are not to be immediately utilized for building needs the areas would be available for revegetation and returned to a more naturalized condition for use by local wildlife populations, and to enhance the aesthetic value of the areas currently occupied by the unused buildings that are in a state of disrepair.

ALTERNATIVES CONSIDERED: The only alternative to the Proposed Action considered was the No-Action Alternative. Under the No-Action Alternative, the Arsenal would not demolish the identified buildings, which would have a detrimental effect on land use and health and safety issues on the Arsenal. The No-Action Alternative would not be considered viable, since potential negative impacts would be expected as the buildings continue to deteriorate. Renovation of these buildings is not considered viable due to the existing issues with ACM, lead-based paint, and outdated electrical, plumbing, and HVAC systems.

ENVIRONMENTAL EFFECTS: Eleven broad environmental components were considered to provide a context for understanding the potential effects of the Proposed Action and a basis for assessing the significance of potential impacts. The areas of environmental consideration are air quality, biological resources, cultural resources, hazardous materials and waste, health and safety, infrastructure and transportation, land use, noise, geology and soils, socioeconomics, and water resources.

There would be potential positive impacts anticipated to land use, health and safety, and socioeconomics as a result of demolition of the buildings as prescribed under the Proposed Action. Mitigation measure(s) identified for these actions, where applicable, are included in Chapter 5, Conclusions and Mitigations Summary.

CONCLUSION: The Proposed Action would optimize facility operations and allow better land use and decrease health and safety concerns of some of the buildings on the Arsenal and surrounding areas. We found no significant environmental impacts associated with this action which would require the publication of an Environmental Impact Statement.

DEPARTMENT OF THE ARMY
UNITED STATES ARMY AVIATION AND MISSILE COMMAND
REDSTONE ARSENAL, ALABAMA

FINDING OF NO SIGNIFICANT IMPACT FOR THE DEMOLITION OF BUILDINGS 134, 3433, 3714, 5100, 5105, 5107, AND 8978 ON REDSTONE ARSENAL, ALABAMA

PREPARED SEPTEMBER 1999

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EXECUTIVE SUMMARY

INTRODUCTION

Redstone Arsenal (RSA) is located in Madison County, southwest and adjacent to the city of Huntsville, Alabama. Prior to acquisition by the Army, the land comprising the present day Arsenal was primarily used for producing cotton, corn, hay, small grain crops, and livestock. The original land was purchased in 1941-42 from 320 landowners under the Siebert Arsenal Project. Redstone Arsenal began as three contiguous facilities, Huntsville Arsenal, the Gulf Chemical Warfare Depot (GCWD), and the Redstone Ordnance Plant. These three facilities were constructed to manufacture, assemble, and store chemical munitions. Huntsville Arsenal, the GCWD, and the Redstone Ordnance Plant were eventually combined in 1949 into the current RSA with approximately 32,000 combined acres. Over the years, acreage has increased and decreased during various transactions. RSA currently comprises 37,910 acres (including special-use permit land) located on an approximately six mile wide by ten mile long site. (U.S. Army Missile Command, 1995)

DESCRIPTION OF THE PROPOSED ACTION

The Proposed Action is to demolish seven buildings and structures located in various locations across RSA which have been found to be in excess of Army needs and in some cases pose human health and safety hazards.

ALTERNATIVES CONSIDERED

Since renovation of these buildings was not considered viable due to existing issues with asbestos-containing material, lead-based paint, and outdated electrical, plumbing, and HVAC (heating, ventilation, and air conditioning) systems, the No-Action Alternative is the only alternative considered to the Proposed Action. Under the No-Action Alternative, the Arsenal would not demolish the identified buildings, which would have a detrimental effect on land use and health and safety issues on the Arsenal. The No-Action Alternative was not considered viable, since potential negative impacts would be expected as the buildings continue to deteriorate.

METHODOLOGY

This Supplemental Environmental Assessment (EA) analyzes the potential environmental consequences of the Proposed Action in compliance with the National Environmental Policy Act (NEPA); Department of Defense Directive 6050.1, *Environmental Effects in the United States of Department of Defense Actions*; and Army Regulation 200-2, *Environmental Effects of Army Actions.* This document supplements and is tiered from a previous EA performed on RSA entitled *Environmental Assessment for the Demolition of 35 Buildings and Ancillary Structures on Redstone Arsenal, Alabama* dated February 1998.

Eleven environmental components were considered as a basis for assessing the significance of potential impacts. These areas are air quality, biological resources, cultural resources, hazardous materials and waste, health and safety, infrastructure and transportation, land use, noise, geology and soils, socioeconomics, and water resources.

To assess the significance of environmental impacts, a list of activities necessary to accomplish the Proposed Action was developed. The environmental setting was described and activities with the potential for significant environmental consequences were identified. Three levels of impacts were considered: no impact, no significant impact, and significant impact.

RESULTS

This section summarizes the analyses for each of the 11 areas of environmental consideration.

AIR QUALITY - There would be no significant impacts to air quality anticipated from building demolition activities under the Proposed Action. Activities during demolition would produce short-term, intermittent air quality impacts from fugitive dust (particulate matter). However, federal and state National Ambient Air Quality Standards (NAAQS) concentrations would not be expected to be exceeded. Fugitive dust would be controlled, and such emissions are not expected to contribute to the long-term impacts on air quality of the area. Mitigation measures, which are described in detail in Chapters 4 and 5, consist primarily of minor operational restrictions that would be implemented with the Proposed Action.

BIOLOGICAL RESOURCES

Vegetation - All of the buildings under consideration for removal are located in areas previously disturbed by construction. The existing vegetation is primarily landscape trees, shrubs, and sod. The Arsenal does not plan to remove existing large vegetation (*i.e.* trees) from areas around the buildings proposed for demolition, if such action can be avoided. Further, the Arsenal plans to revegetate the areas to sod and/or trees when the demolition and removal activities are completed. These actions would result in positive impacts to biological resources from the Proposed Action. Under the No-Action Alternative, no impacts to biological resources would be anticipated.

Fish and Wildlife - A variety of wildlife species are found on the Arsenal. Some of these species have the potential to be found in and around the areas slated for demolition. With the exception of some common bird and small mammal species, these areas do not currently provide suitable habitat or nesting/den locations for many species. No fishery resources are located in the vicinity of the buildings designated for possible demolition in the Proposed Action. Under the No-Action Alternative, no impacts to these resources would be anticipated.

Threatened and Endangered Species - Redstone Arsenal has been surveyed for threatened and endangered species and some species are present. However, the areas impacted by the demolition activities do not have suitable habitat for listed or candidate species and no species are present in the demolition areas. Implementing the Proposed Action or the No-Action Alternative would have no impact on threatened or endangered flora or fauna at RSA, or their habitats.

Wetlands – Only one structure, Building 5100, is located in the vicinity of a wetlands. These wetlands are associated with Huntsville Spring Branch (HSB) near Gate 1, which flows across the northeast corner of Redstone Arsenal. Due to the small size of this structure, approximately 10 feet by 10 feet, and the fact that the structure is located on the

Martin Road right-of-way, no wetland impacts would be expected from its demolition. Demolition contractor's personnel would be advised to avoid disturbances or encroachment on the nearby wetland areas.

Unique Habitats - Redstone Arsenal has been surveyed and unique ecological areas have been identified. No unique habitats occur in the vicinity of the buildings designated for demolition. Neither the Proposed Action nor the No-Action Alternative would be expected to impact these resources.

CULTURAL RESOURCES - There would be no significant impacts to cultural resources from demolition of the buildings listed from the Proposed Action. The buildings addressed in this Supplemental EA have been determined not eligible for the National Register of Historic Places (NRHP). RSA is in consultation with the Alabama State Historic Preservation Office (ALSHPO) and has asked for their concurrence that these buildings are not eligible for the NRHP and the determination of no effect to historic properties. There would be potential negative impacts to cultural resources under the No-Action Alternative, since there would be no clearly defined plan for the restoration or maintenance of any of the buildings under consideration for demolition.

HAZARDOUS MATERIALS AND WASTE - All of the buildings under consideration for demolition have been vacant for some time. Due to the age of the buildings, constructed between 1945 and 1961, there is the potential that some of them may still contain ACM and/or lead-based paint. No attempts to remove these materials have been made since the buildings were vacated; however, the first step in the demolition process will be to remove any ACM from the buildings and properly dispose of this material prior to demolition. No significant impacts from hazardous materials and waste would be expected from the Proposed Action provided mitigative measures, that mostly concern the proper disposition of demolition waste, are implemented. Potentially negative impacts from hazardous materials and waste would result from the No-Action Alternative. The No-Action Alternative would place a burden on the Arsenal to maintain these structures or secure them from the public to avoid liability from the hazards contained within. If the No-Action Alternative were chosen, the ACM would still need to be removed from the buildings and disposed of properly.

HEALTH AND SAFETY - No significant impacts to health and safety from the Proposed Action are anticipated provided mitigative measures are implemented. These measures consist primarily of operational issues to protect human health and the environment, and are detailed in Chapters 4 and 5 of this EA. By contrast, there would be potential negative impacts to health and safety under the No-Action Alternative, if the buildings under consideration were not demolished.

INFRASTRUCTURE AND TRANSPORTATION - There are no impacts anticipated to infrastructure and transportation from implementation of the Proposed Action or the No-Action Alternative. There are no utility requirements expected for demolition activities and the Arsenal's existing roadway network is expected to provide suitable access to the proposed demolition sites throughout the Arsenal.

LAND USE - There would be positive impacts anticipated to land use under the Proposed Action. The land currently occupied by the buildings considered for demolition would be available for alternative uses. Demolition of the buildings would

help optimize long-term land use on the Arsenal, consistent with good management practices and a long-range planning perspective. The No-Action Alternative would have potential negative impacts to land use. The No-Action Alternative would place a burden on the Arsenal to maintain these structures or secure them from the public to avoid liability from the hazards contained within.

NOISE - There would be brief periods of noise impacts anticipated from the Proposed Action. However, these impacts would not be considered significant. Demolition activities would generate noise during periods of demolition, which although not continuous, could be disruptive for brief periods. Buildings currently identified for demolition are not adjacent to sensitive noise receptors (such as threatened or endangered species, hospitals, or schools). There would be no impacts to noise under the No-Action Alternative.

GEOLOGY AND SOILS - There would be no impacts anticipated to the geology or soils from the Proposed Action or the No-Action Alternative.

SOCIOECONOMICS - The buildings under consideration for demolition have been abandoned for some time and do not currently contribute to the socioeconomic base of the Arsenal. The Proposed Action to demolish the buildings is expected to have a positive impact on local socioeconomics. A number of job opportunities, from pre- and post- demolition activities would be anticipated from the Proposed Action. Incidental positive impacts to socioeconomics associated with future construction projects would be expected and evaluated under separate environmental documentation for those projects. No impacts to socioeconomics from the No-Action Alternative would be anticipated.

WATER RESOURCES - No impacts to water resources are anticipated under the Proposed Action or the No-Action Alternative. Demolition activities would be performed in a manner and under conditions that would ensure that soil erosion from the demolition sites is minimized and does not run off to drainage ditches and impact water resources if the Proposed Action is implemented.

CONCLUSION

Redstone Arsenal proposes to demolish seven buildings considered to be in excess of current Army needs. These buildings have been abandoned for some time and are in various states of disrepair. Additionally, some of the buildings are suspected to contain ACM and lead-based paint. To reduce health and safety liability issues and to free up the areas for current and future mission needs, the buildings need to be removed. This Supplemental EA is tiered from the *Environmental Assessment for the Demolition of 35 Buildings and Ancillary Structures on Redstone Arsenal, Alabama,* dated February 1998.

No significant impacts are anticipated from implementing the Proposed Action. There would be positive impacts anticipated to land use, health and safety, and socioeconomics. Mitigation measures have been identified for air quality, hazardous materials and waste, and health and safety.

Under the No-Action Alternative, the Arsenal would continue to monitor and maintain the buildings in their current state. The No-Action Alternative was not considered viable,

since potential negative impacts would be expected to land use and health and safety as the buildings continue to deteriorate.

LIST OF ACRONYMS AND ABBREVIATIONS

AAC	ADEM Administrative Code
ACHP	Advisory Council on Historic Preservation
ACM	Asbestos-Containing Material
ADEM	Alabama Department of Environmental Management
ALNHP	Alabama Natural Heritage Program
ALSHPO	Alabama State Historic Preservation Office
AMCOM	U.S. Army Aviation and Missile Command
AR	Army Regulation
CAA	Clean Air Act
CAAA	Clean Air Act Amendments
CEQ	Council on Environmental Quality
CERCLA	Comprehensive Environmental Response, Compensation, and Liability Act
CFR	Code of Federal Regulations
CWA	Clean Water Act
DoD	Department of Defense
DOT	Department of Transportation
EA	Environmental Assessment
EPA	Environmental Protection Agency
GCWD	Gulf Chemical Warfare Department
HSB	Huntsville Spring Branch
HVAC	Heating, Ventilation, and Air Conditioning
ICUZ	Installation Compatible Use Zone
MICOM	U.S. Army Missile Command
MSL	Mean Sea Level
NAAQS	National Ambient Air Quality Standards
NASA	National Aeronautics and Space Administration
NEPA	National Environmental Policy Act
NESHAP	National Emission Standards for Hazardous Air Pollutants
NPDES	National Pollutant Discharge Elimination System
NRHP	National Register of Historic Places
OSHA	Occupational Safety and Health Administration
RACM	Regulated Asbestos-Containing Material
RCRA	Resource Conservation and Recovery Act
ROI	Region of Influence
RSA	Redstone Arsenal
SARA	Superfund Amendments and Reauthorization Act
SCS	Soil Conservation Service
SHPO	State Historic Preservation Office
SIP	State Implementation Plan
SSHP	Site Safety and Health Plan
SWDF	Solid Waste Disposal Facility
USDA	Unites States Department of Agriculture
USFWS	United States Fish and Wildlife Service
WNWR	Wheeler National Wildlife Refuge

TABLE OF CONTENTS

LIST OF FIGURES

LIST OF TABLES

APPENDICES

1.0 PURPOSE OF AND NEED FOR ACTION

The National Environmental Policy Act (NEPA); Council on Environmental Quality (CEQ) regulations implementing NEPA (40 Code of Federal Regulations [CFR] 1500-1508); Department of Defense (DoD) Directive 6050.1, *Environmental Effects in the United States of Department of Defense Actions*; and Army Regulation (AR) 200-2, *Environmental Effects of Army Actions*, which implement these laws and regulations, direct DoD and Army officials to consider environmental consequences when authorizing or approving federal actions. This Environmental Assessment (EA) analyzes the environmental consequences of the demolition of seven buildings on Redstone Arsenal (RSA).

1.1 DESCRIPTION OF THE PROPOSED ACTION

In February 1998, the RSA Directorate of Environmental Management and Planning (DEMP) completed an EA for the demolition of a number of buildings and structures on the Arsenal (*Environmental Assessment for the Demolition of 35 Buildings and Ancillary Structures on Redstone Arsenal*, February 1998). This EA is available for review at the Directorate of Environmental Management and Planning (DEMP) office on RSA. Subsequent to the publication of that EA, seven additional buildings/structures were identified by the Army for demolition. These buildings, whose approximate locations are depicted in Figure 1-1, are the subject of this Supplemental EA. The Proposed Action is to demolish, in place, these seven buildings which are located in various areas on RSA. Some of these buildings have been abandoned for some time and may contain asbestos-containing material (ACM) and lead-based paint. The buildings would be razed by conventional demolition methods following appropriate ACM and lead-based paint abatement procedures.

1.1.1 Background. Redstone Arsenal is located in Madison County, southwest and adjacent to the city of Huntsville, Alabama. RSA currently comprises 37,910 acres (including special-use permit land) located on an approximately six mile wide by ten mile long site and is the Headquarters of the U.S. Army's Aviation and Missile Command (AMCOM). Approximately 2,900 civilian and military personnel are employed on RSA. A more detailed discussion of the background of RSA is contained in the February 1998 EA.

1.1.2 Purpose of the Action. The purpose of the proposed building demolitions is to remove a potential health and safety hazard posed by the buildings identified. The Proposed Action would raze structures that are considered to be unsuitable for renovation and in excess of Army needs. This Proposed Action would return the areas currently occupied by these buildings to a more useable status. Those buildings that contain ACM would have the material removed prior to the demolition of the building.

1.1.3 Need for the Action. Redstone Arsenal requires ample area to accommodate new development and growth for installation needs and mission requirements, and an obligation to provide a safe environment for installation personnel. Removal of the buildings identified in the Proposed Action would allow room for the reutilization of these locations in some of the prime building locations within the Arsenal. If the areas

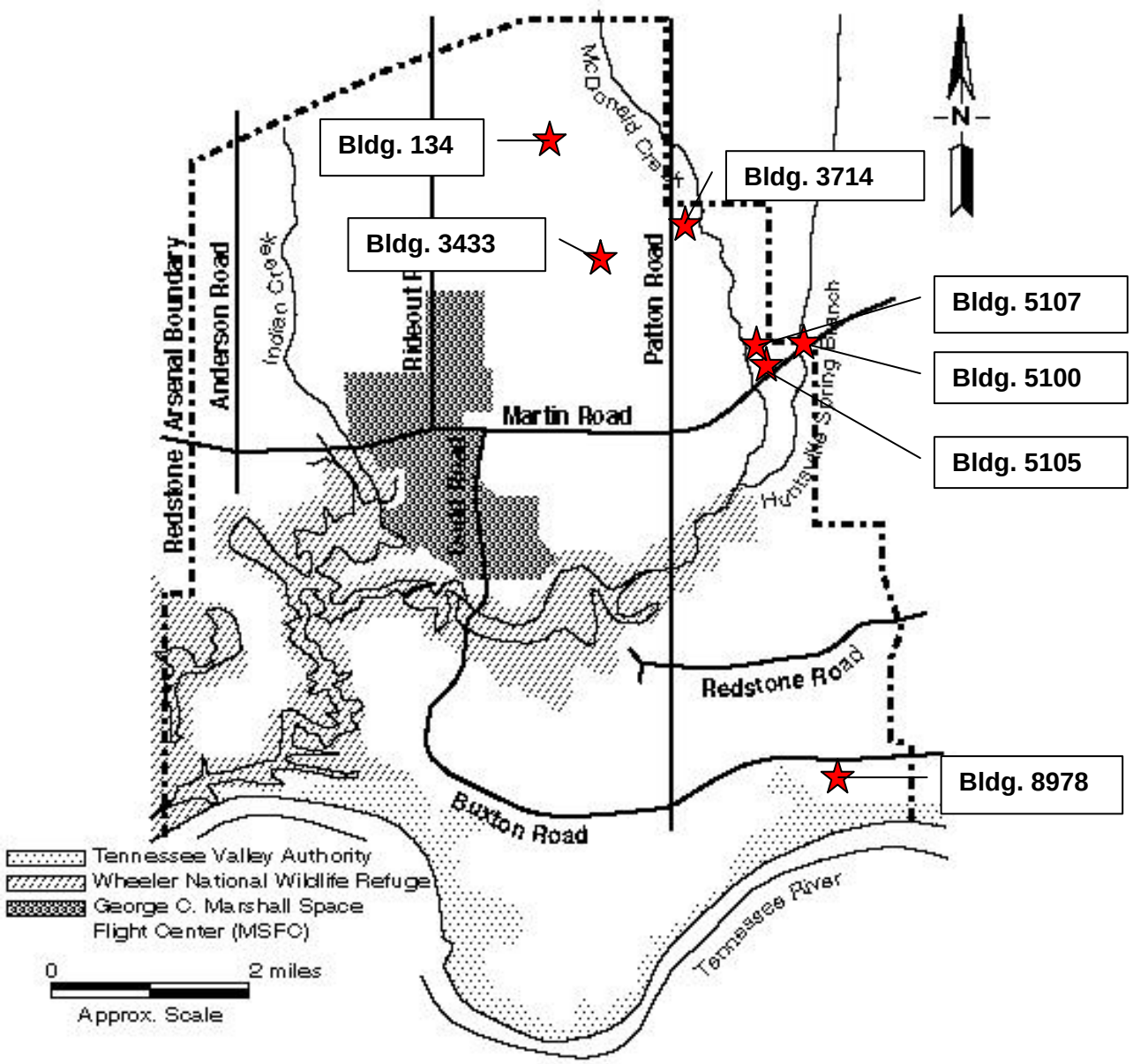

Figure 1-1
Approximate Locations of Buildings Proposed for Demolition

are not to be immediately utilized for building needs, the areas would be available for revegetation and returned to a natural condition for use by local wildlife populations, and

to enhance the aesthetic value of the areas currently occupied by the unused buildings that are in various states of disrepair.

1.2 AGENCIES INVOLVED IN ENVIRONMENTAL ANALYSIS

The Alabama State Historic Preservation Office (ALSHPO) and the Advisory Council on Historic Preservation (ACHP) is being consulted to determine their concerns regarding the Proposed Action (Appendix A). In addition, the U.S. Fish and Wildlife Service (USFWS) will be consulted to determine their concerns regarding the Proposed Action.

1.3 PUBLIC INVOLVEMENT

There will be a 30-day comment period after the Notice of Availability of the Supplemental EA for the demolition of the buildings and structures on RSA addressed in this document is published in the local newspaper. Other federal, state, and local agencies are not currently involved in the planning of this action.

There were no significant environmental issues determined through this EA process which would result in the need for an Environmental Impact Statement. All issues raised during the scope of the process have been identified within this assessment.

2.0 ALTERNATIVES INCLUDING THE PROPOSED ACTION

2.1 SUMMARY OF ALTERNATIVES

During the planning stage for the Proposed Action, the Proposed Action and the No-Action Alternative were assessed for potential impacts to the environment and described in the following sections.

2.2 DESCRIPTION OF ALTERNATIVES INCLUDING THE PROPOSED ACTION

2.2.1 Alternative 1 - Proposed Action. The Proposed Action is to demolish in-place seven buildings located on RSA, Alabama. These buildings have been abandoned for some time and several are known to contain ACM and/or lead-based paint. The buildings would be razed by conventional demolition methods after the ACM have been removed. Representative photos showing the condition of the buildings to be demolished throughout the Arsenal is shown in Figures 2-1 through 2-7.

2.2.2 Alternative 2 - No-Action Alternative. Under the No-Action Alternative, the Arsenal would not demolish the identified buildings. No modifications or renovations would be made to the buildings and they would remain unoccupied. As a result, the buildings would continue to deteriorate and pose health and safety hazards. RSA would need to find alternate locations to accommodate growth and mission changes.

Figure 2-1
View of Building 134, Unaccompanied Officers Quarters (UOQ)

Figure 2-2
View of Building 3433, Enlisted Unaccompanied Personnel Housing (UPH)

Figure 2-3
View of Building 3714, Post Chapel

Figure 2-4
View of Building 5100, Telephone Cable House

Figure 2-5
View of Building 5105, Access Control Facility

Figure 2-6
View of Building 5107, Water Well Pump House

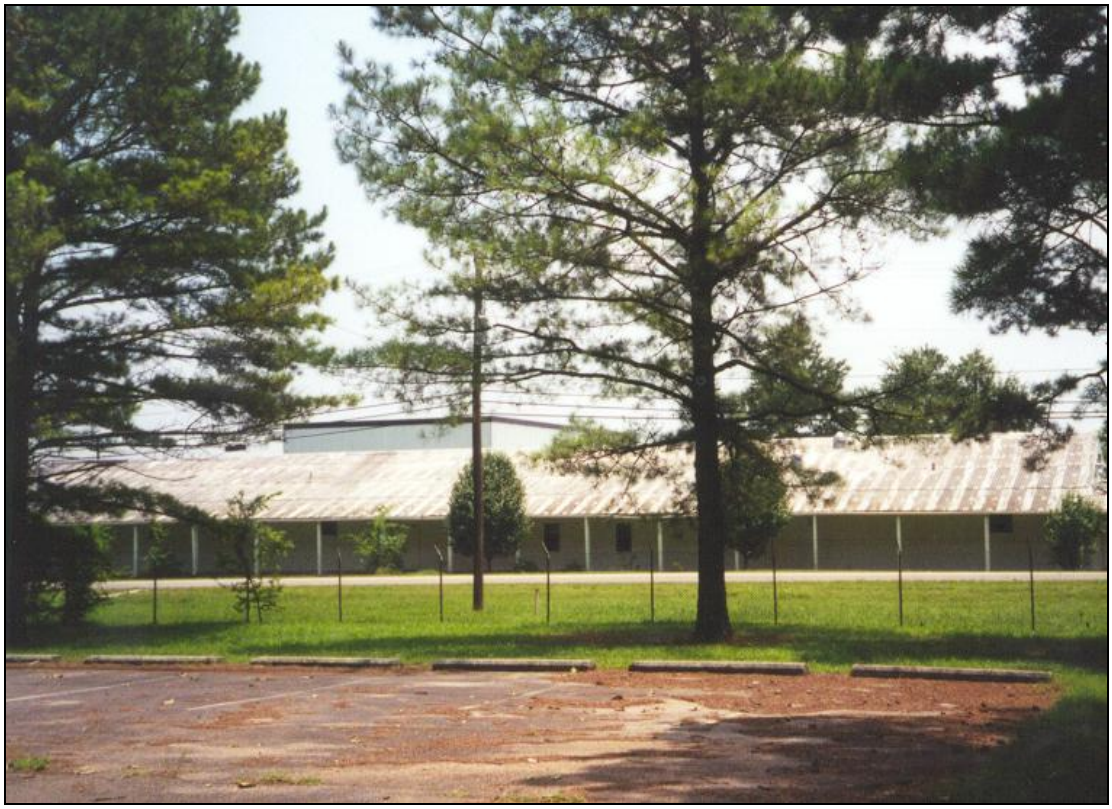

Figure 2-7
View of Building 8978, Redstone Ordnance Plant, Line 6,
Change House/Administration Building

3.0 AFFECTED ENVIRONMENT

This section describes the environment potentially affected by the Proposed Action. As previously mentioned, this EA is a supplement to the previous EA performed in 1998 which addressed environmental conditions existing at RSA during that period. Therefore, no attempt is made, in this document, to extensively discuss existing conditions but rather give key highlights and reference the 1998 EA.

Eleven broad environmental components were considered to provide a context for understanding the potential effects of the Proposed Action and as a basis for assessing the significance of potential impacts. Several of these environmental components are regulated by federal and/or state environmental statutes, many of which set specific guidelines, regulations, and standards. These standards provide benchmarks for determining the significance of environmental impacts. The areas of environmental consideration are air quality, biological resources, cultural resources, hazardous materials and waste, health and safety, infrastructure and transportation, land use, noise, geology and soils, socioeconomics, and water resources.

Region of Influence (ROI) - The ROI for the Proposed Action is the area occupied by the buildings proper, since the buildings under consideration for demolition are located throughout the entire Arsenal.

3.1 AIR QUALITY

Existing air quality is determined through examination of air quality standards. Air quality standards are established and maintained through both state and federal programs to protect human health and welfare. The purpose of this chapter is to identify those state and federal programs that regulate maintenance of air quality in the area around RSA that would potentially be affected by demolition operations. The potential impacts to Air Quality will be discussed in Chapter 4.

3.1.1 Regulatory Overview - This regulatory overview addresses state and federal air regulations potentially applicable to the proposed demolition of buildings at RSA located in Huntsville, Alabama. Some of the buildings contain ACM and lead-based paint.

The Clean Air Act (CAA) of 1970 and the Clean Air Act Amendments (CAAA) of 1990 authorize the Environmental Protection Agency (EPA) to develop programs for the control and abatement of air pollution from the construction, reconstruction, or modification of air emission sources of regulated pollutants. The emphasis of these programs is to protect public health and welfare through maintenance of air quality standards for air pollutants.

EPA delegates much of its authority to administer regulations to the states, who in turn, are responsible for developing State Implementation Plans (SIP) for the maintenance of air quality. ADEM is the environmental regulatory authority for the State of Alabama. ADEM has adopted federal regulations into the ADEM Administrative Code (AAC) Division 315-3.
The CAA established National Ambient Air Quality Standards (NAAQS) for criteria pollutants. (Those for which health-based standards have been developed - carbon

monoxide (CO), sulfur dioxide (SO_2), nitrogen oxides (NO_x), particulate matter less than 10 microns (PM 10), particulate matter less than 2.5 microns (PM 2.5), ozone (O_3), and lead (Pb). ADEM has incorporated NAAQS into AAC Division 315-3 Chapter 1 (AAC 315-3-1) Table 3-1.

Table 3-1 National Ambient Air Quality Standards (40 CFR PART 50)

POLLUTANT	PRIMARY (HEALTH STD.) AVERAGING TIME	CONCENTRATION	SECONDARY (WELFARE STD.) AVERAGING TIME	CONC.
Particulate (PM 10)	Annual Arithmetic Mean 24- Hour	50 μg/M^3 150 μg/M^3	Same As Primary	---
Particulate (PM 2.5*)	Annual Arithmetic Mean 24- Hour	15 μg/M^3 65 μg/M^3	Same As Primary	---
Sulfur Dioxide	Annual Arithmetic Mean 24- Hour	.03 ppm .14 ppm	3- Hour	.5 ppm
Carbon Monoxide	8- Hour 1- Hour	9 ppm 35 ppm	No Secondary Standard	---
Ozone*	Max. Daily 8-Hour Average 1-Hour Average	.08 ppm .12 ppm	Same As Primary	---
Nitrogen Dioxide	Annual Arithmetic Mean	.053 ppm	Same As Primary	---
Lead	Maximum Quarterly Average	1.5 μg/M^3	Same As Primary	---

* The EPA revised the NAAQS for Ozone and Particulate Matter in July 1997.

The 1997 edition of Huntsville Alabama's Air Quality Report that focused on the period from 1992 – 1996 indicates that Huntsville is presently an attainment area for all federal air quality standards, however, long term data trends continue to indicate a decline in ambient pollution concentrations. However, even with continued improvement in air quality, EPA's promulgation of a new particulate standard and revision of the ozone standard could adversely impact Huntsville's attainment status. The standards are significantly more stringent than those formerly in place and will require a concerted effort to achieve and maintain particularly in urbanized areas across the nation. Continued maintenance of Huntsville's clean air status will require a coordinated effort by industry, government and the general public.

3.2 BIOLOGICAL RESOURCES

Affected Environment - RSA is a single tract of land encompassing approximately 38,000 acres and is diverse in both topography and flora and fauna. Elevations range from approximately 570 feet above mean sea level (msl) in bottomlands to 1,200 feet msl in the mountainous regions of the Arsenal. Forest lands, rights-of-way, test areas, old-fields (abandoned open areas) in various stages of plant succession, in addition to developed areas, creeks, sloughs, and ponds provide abundant diversity in wildlife and fishery habitat on the Arsenal. Approximately one-third of RSA lies within the 100-year flood plain of the Tennessee River (U.S. Army Missile Command, 1994).

This section describes the biological resources of the specific areas currently occupied by the buildings proposed for demolition by major biotic habitat. A more detailed description of the biology of RSA is contained in the 1998 demolition EA. Additionally, a list of common native vegetation within RSA boundaries can be found in Appendix B of the *Natural Resources Management Plan for Redstone Arsenal*.

Vegetation - Redstone Arsenal is within the southern portion of a region dominated by oak-hickory forest and other hardwood species. Most of this native forest has been cut for timber or cleared for other uses. The Proposed Action sites are located at various areas primarily in the eastern portion of Redstone Arsenal. The vegetated areas surrounding the Proposed Action sites have been previously impacted by existing or previously existing structures and consist of landscape plantings of grassy areas (primarily common Bermuda, Johnson grass, and red clover), lawns (primarily common Bermuda), shrubs (e.g., Chinese, Burford, Foster, and Japanese holly, azalea, juniper; nandina, photinia, abelia, Russian olive, ligustrum, pyracantha), and trees (e.g., various species of oaks, maples, and locust, Southern magnolia, dogwood, red bud, white and loblolly pine, sycamore, white ash) that have been in place for many years. Stands of eastern red cedar-loblolly pines mixed with hardwoods are scattered throughout the marginal areas of some of the structures. The existing vegetation in the immediate vicinity of the structures is primarily landscape trees, shrubs, and sod.

Fish and Wildlife – The wide range of terrestrial habitats, and the large size of the Arsenal, results in the use of the area by various wildlife species. The Proposed Action sites have been previously developed and do not support extensive habitat for wildlife. Occasional sightings are made of various wildlife such as deer, rabbit, or fox as they transit the Arsenal areas. More than 250 species of birds are known to occur on the Arsenal and do transit the areas occasionally. Large nesting habitats are not prevalent. A comprehensive listing of mammals occurring on or in the vicinity of the Arsenal is presented in Appendix F of the *Final Environmental Assessment for Redstone Arsenal Master Plan Implementation*.

There is the potential for any of the terrestrial wildlife species listed in the above referenced documents to occur either temporarily or permanently in the vicinity of the buildings proposed for demolition. Fish and other aquatic species would not occur on any of the areas considered as suitable habitat is lacking.

Threatened and Endangered Species - Biological resources warranting special protection include threatened and endangered species. Under the Endangered Species Act, federal agencies are prohibited from jeopardizing threatened or endangered species or adversely modifying habitats essential to their survival. Alabama ranks fourth in the nation (after California, Hawaii, and Florida) in the number of federally listed endangered and threatened plants and animals. No threatened or endangered species are located in the vicinity of the Proposed Action sites.

Wetlands - For an area to be classified as a Clean Water Act (CWA) (Section 404 [b]) jurisdictional wetland, evidence of three parameters are required (U. S. Army Corps of Engineers, 1987). These parameters are the presence of hydrophytic vegetation, hydric soils, and wetland hydrology. Hydrophytic vegetation can be described as plant life growing in water or in a substrate that is, at least periodically, deficient in oxygen as a result of excessive water content. Hydric soils are soils that have been saturated, flooded,

or ponded long enough during the growing season to develop anaerobic conditions in their uppermost layer. Wetland hydrology requires that the potential wetland area be inundated or have a water table within inches of the ground surface for a specified period.

Wetlands on RSA are home to a large number and variety of plant and animal species. About 26 percent of the installation is covered by wetlands. The wetlands are mostly associated with creeks or spring runs that are easily effected by the elevation of the Tennessee River (Weber, 1996) and have bottomland hardwood forests associated with the Tennessee River and its major tributaries. The water levels in the Tennessee River and its tributary system fluctuate seasonally according to the flood control mission of Wheeler Dam. Beaver activity also influences low-lying areas with periodic and sometimes permanent inundation.

Table 3-2 provides a summary of the wetlands and acreage by major wetland type within the installation boundary. About half of the Arsenal wetlands are under WNWR jurisdiction. RSA's obligation is to oversee construction projects near any wetlands and to provide protection for both WNWR and installation wetlands and mitigate any problems caused by construction in or near these areas.

Table 3-2 Wetland Types on Redstone Arsenal

Wetland Type	Acreage (rounded to nearest 1/10 acre)
Palustrine emergent (PEM)	1,213.7
Palustrine forested (PFO)	6,381.7
Palustrine aquatic beds (PAB)	2.4
Palustrine scrub-shrub (PSS)	1,057.6
Palustrine unconsolidated bottoms (PUB)	62.8
Palustrine unconsolidated shoreline (PUS)	7.0
Palustrine overlapping types (Pmulti)	400.3
Lacustrine types (all)	668.5
Riverine/Stream types (all)	95.5
Total	**9,889.5 acres**

Source: Data from Geonex, 1995

Only one structure, Building 5100, is located in the vicinity of a wetland area. This palustrine forested (PFO) wetland area is associated with Huntsville Spring Branch (HSB) near Gate 1, which flows across the northeast corner of Redstone Arsenal, and is located on the north side of the structure.

Unique Habitats - Biological resources warranting special protection include species that occupy unique habitats. There are several locations throughout RSA that fall under these categories (ALNHP, 1995) including several aquatic and terrestrial cave communities, springs, and bluffs. There are no unique habitats known to be near any of the buildings under consideration for demolition.

3.3 CULTURAL RESOURCES

Affected Environment - Cultural resources consist of prehistoric and historic districts, sites, structures, artifacts, and any other physical evidence of human activity considered important to a culture or community for scientific, traditional, religious, or other reasons. A detailed discussion of cultural resources in general and their locations on RSA is contained in the February 1998 demolition EA and other cultural resource documentation located at the DEMP offices on RSA.

The buildings under consideration for demolition in this EA are being evaluated for National Registrar of Historic Places (NRHP) eligibility through consultation between the RSA DEMP cultural resources staff and the Alabama State Historic Preservation Office (ALSHPO).

3.4 HAZARDOUS MATERIALS AND WASTE

Hazardous Materials - Regulatory agencies have defined hazardous material as applied to specific situations. The Department of Transportation (DOT) specifies the broadest and most applicable definition for regulation of transportation of hazardous materials on public roads. DOT defines a hazardous material as a substance or material which is capable of posing an unreasonable risk to health, safety, or property when transported in commerce and has been so designated (49 CFR 171.8). There are no public roads on RSA, and no off-site transportation of hazardous materials is anticipated from the Proposed Action.

Lead-Based Paint **-** Lead was used in many paints applied before 1978. It was also used in piping, cable sheaths, batteries and solder. Lead is regulated in the workplace for exposure to workers although most documented health effects relate to pregnant women and children where exposure has been correlated with birth defects and learning difficulties. As a result of these risks, there has been a large scale lead abatement program within public buildings over the last few years in the U.S. The requirements for workers to follow dust control techniques and respiratory protection normally only become effective when paint containing lead is abraded or the structure is demolished. (The Environmental News, 1995) All of the buildings are suspected to contain lead-based paint since they were constructed prior to 1978. It is commonly accepted that structures that were built prior to 1978 are suspected to contain lead-based paint, however, through the years most lead-based paint that has not been abated has been painted over with oil and/or latex-based paints.

Asbestos-Containing Materials **-** Historically, asbestos has been used in literally hundreds of products. Collectively, these products are frequently referred to as asbestos-containing materials (ACM). Asbestos gained widespread use because it was plentiful, readily available, low in cost, and had unique properties. It does not burn, is strong, conducts heat and electricity poorly, and is impervious to chemical corrosion. Asbestos surveys have been conducted throughout the Arsenal on various occasions. Of the seven buildings under consideration for demolition, two (5100 and 5107) are known to contain no ACM, the remaining buildings (134, 3433, 3714, 5106, and 8978) contain small amounts of ACM (Table 3-3).

Hazardous Waste - Waste materials (less commonly referred to as solid waste) are defined in 40 CFR 261.2 as, “any discarded material (i.e., abandoned, recycled, or ‘inherently waste-like’)” that is not specifically excluded. This can include both solid

and containerized liquid materials. Hazardous waste is further defined in 40 CFR 261.3 as any solid waste not specifically excluded that meets specific concentrations or has certain toxicity, ignitability, corrosivity, or reactivity characteristics. Hazardous waste oversight is provided primarily by the EPA (as mandated by Resource Conservation and Recovery Act (RCRA), Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA), and Superfund Amendments and Reauthorization Act (SARA)). EPA regulations are found in 40 CFR. DOT regulates hazardous waste transportation. DOT requirements are found in 49 CFR.

It should be noted that due to the early construction dates of the structures proposed for demolition in this document (prior July 1978), it would reasonable to suspect that some polychlorinated biphenyl (PCB)-containing fluorescent lighting ballast may exist in any of these structures. According to the EPA, all ballasts manufactured prior to July 1978 have a greater than 50% chance of containing PCBs at 50 parts per million (ppm) in their potting material. Also, high intensity discharge (HID) lamps may also be found in these structures. HID is a generic term referring to mercury vapor, metal halide, and high- and low-pressure sodium light sources. HID lamps contain a small amount of mercury.

3.5 HEALTH AND SAFETY

Affected Environment - Health and safety includes consideration of any activities, occurrences, or operations that have the potential to affect one or more of the following.

- The well being, safety, or health of workers - Workers are considered persons directly involved with the operation or who are physically present at the operational site.

- The well being, safety, or health of members of the public - Members of the public are considered persons not physically present at the location of the operation, including workers at nearby locations who are not involved in the operation and the off-installation population.

The Occupational Safety and Health Administration (OSHA) is responsible for protecting worker health and safety in non-military workplaces. OSHA regulations are found in 29 CFR 1910. Protection of public health and safety is an EPA responsibility and mandated through a variety of laws such as RCRA, CERCLA/SARA, CWA and the CAA. EPA regulations are found in 40 CFR 265.382. Additional safety responsibilities are placed on the DOT in 49 CFR. Department of the Army program requirements are outlined in AR 385-100.

Table 3-3 Buildings Proposed for Demolition on Redstone Arsenal

Building Number	Building Name	Construction Date	Square Footage	ACM	Lead-Based Paint
134	Unaccompanied Officers Quarters (UOQ) Transient	1961	10,117	yes	suspected
3433	Enlisted Unaccompanied Personnel Housing (UPH)	1960	35,703	yes	suspected
3714	Post Chapel	1957	10,902	yes	suspected
5100	Telephone Cable House	1966	103	no	suspected
5105	Access Control Facility	1961	4,020	yes	suspected
5107	Water Well Pump House	1961	111	no	suspected
8978	Redstone Ordnance Plant, Line 6, Change House/Administration Building	1945	10,312	yes	suspected

Building Number	Historical Chemical Usage/ Potential Contaminants*	NRHP Eligibility	SHPO Concurrence	ACHP Concurrence
134	no contaminants	no	yes	N/A
3433	no contaminants	no	yes	N/A
3714	no contaminants	no	yes	N/A
5100	no contaminants	no	yes	N/A
5105	no contaminants	no	yes	N/A
5107	no contaminants	no	yes	N/A
8978	no contaminants	no	yes	N/A

3.6 INFRASTRUCTURE AND TRANSPORTATION

Affected Environment - Infrastructure addresses those facilities and systems that provide power, water, wastewater treatment, the collection and disposal of solid waste, fire, health, and police services to RSA. Transportation addresses the modes of transportation (air, road, rail, and marine) that provide circulation within and access to the installation. Detailed discussions of these infrastructure and transportation resources for RSA can be found in the 1998 demolition EA from which this document is tiered.

3.7 LAND USE

Affected Environment - RSA prepared a Land Use Plan as part of the 1989-1994 Installation Master Plan. The land on the Arsenal is divided into seven major use areas: Ammunition Supply; Test and Operations; Research and Development; Training; Troop Housing; Community Recreation; and Family Housing. Within these areas are facilities for recreation, administration, training, operational maintenance, production tests, storage, and post maintenance. The NASA Marshall Space Flight Center is also located within the Arsenal's boundaries. Approximately 30 percent (11,400 acres) of RSA is considered buildable. There are approximately 2,800 acres remaining that are considered available for development (U.S. Army Missile Command, 1994).

The 1988 RSA forest inventory shows approximately 42 percent (16,180 acres) of the Arsenal covered in forest. Approximately one-third of the Arsenal lies within the 100-year flood plain of the Tennessee River (U.S. Army Missile Command, 1994) and this land is not considered suitable for building.

The buildings under consideration for demolition are dispersed throughout the Arsenal and are no longer used.

3.8 NOISE

Affected Environment - RSA has an Installation Compatible Use Zone (ICUZ) Program to identify noise-generating areas on the Arsenal and to minimize encroachment of noise sensitive activities both on and off the Arsenal. It is not intended to inhibit operations but to inform community officials of the expected noise generation from mission-related activities. RSA is divided into three ICUZ noise zones. Residential housing, schools, churches, and other noise sensitive land uses are located in Zone I. These land uses are considered to be marginally acceptable in Zone II, and unacceptable in Zone III. Army facility planners work with the community governments and planning agencies to promote adequate buffer zones between the Installation's noise sources and the noise-sensitive areas. (U.S. Army Missile Command, 1994) All of the buildings proposed for demolition are located in Zone I.

3.9 GEOLOGY AND SOILS

Affected Environment - According to the U.S. Department of Agriculture (USDA) Soil Conservation Service (SCS) Soil Survey of Madison County, a total of 94 soil phases representing 39 different soil series are mapped within the RSA boundaries. The predominant soil type mapped for the Arsenal consists of a deep, well-drained to moderately well-drained, silt loam to silty clay loam. These soils typically posses a

loamy surface horizon underlain by a loamy to clayey subsoil layer with lenses of silty and/or sandy clay. Rock fragments generally occur throughout the clayey material. The colors range from a brownish-red in the northern portion to a brownish-gray in the southern portion of the Arsenal. Soil depths range from very shallow on the mountainous slopes to much deeper along the larger tributaries along the Tennessee River where broad areas have formed. Soils from six associations can be found within the Arsenals boundaries (Table 3-4).

TABLE 3-4 SOIL ASSOCIATIONS FOUND ON REDSTONE ARSENAL

Soil Association	Description
Decatur-Cumberland-Abernathy	Generally well-drained, red, fertile soils that are thick over limestone bedrock. Found on nearly level to gently rolling terrain.
Allen-Jefferson	Well-drained, generally found on undulating to rolling terrain. Usually occupy gentle valley slopes at the base of steep, stony mountains.
Holston-Tupelo-Robertsville	Poorly to moderately well-drained and variable in texture and permeability. Found on nearly level to undulating terrain.
Hermitage-Talbott-Colbert	Thin with a clayey texture and low permeability. These soils occupy the slopes adjacent to steep mountainous areas.
Huntington-Lindside-Hamblen	Located on nearly level, broad areas of bottom land along the larger creeks and rivers. Subject to periodic flooding.
Rough Stony Land	Thin soil that occupies steep mountainous slopes. Slopes are generally covered with rock debris

Source: U.S. Army Missile Command, 1994

The geologic formations in Madison County are sedimentary in origin and were formed either by the accumulation of fragments of previously existing rocks, by the accumulation of organic matter, or by chemical precipitation. Tuscumbia Limestone, with an average thickness of 150 feet; underlies most of RSA. It often contains enlarged openings that have developed along joints, fractures, and faults.

No significant mineral resources are known to exist on the Arsenal. (U.S. Army Missile Command, 1994)

3.10 SOCIOECONOMICS

Affected Environment - RSA contributes significantly to the economics and demographics of Madison County and northern Alabama. Madison County population, according to 1990 census data, is approximately 240,000. This figure includes over 160,000 that reside in Huntsville. The county labor force is over 140,000. RSA contributes over 21,000 federal government and contractor jobs to the Madison County area, and is the single largest employer in the county. The Arsenal impacts the regional economy not only by direct employment of civilian and military personnel, but by procurement of goods and services as well. The salary and procurement dollars from RSA spent locally on goods and services creates a demand for additional employment and goods and services in the local and northern Alabama economies**.**

3.11 WATER RESOURCES

Affected Environment - To protect both surface water and groundwater resources, and human health, Congress enacted the Clean Water Act and the Safe Drinking Water Act. The EPA has also established water quality standards to protect water resources. Army Regulation 200-1, Chapter 3, implements the Army Water Management Program.

The Tennessee River, flowing west, forms the southern boundary of the Arsenal. Major watercourses that flow through the Arsenal are Indian Creek, HSB, and McDonald Creek. Each of these tributaries generally flows southward and empty into the Tennessee River. Most of the western half of RSA drains into Indian Creek, and the eastern half drains into HSB. Indian Creek originates in the northwestern portion of Madison County; flows southward across RSA; and forms an arm of Wheeler Lake. Indian Creek drains approximately 63 square miles of terrain.

The Fort Payne Chert and Tuscumbia Limestone are the principal aquifers in the ROI. Groundwater movement is generally from north to south. The groundwater in local aquifers moves to lowland areas in stream basins where it discharges through available openings and provides base flow to the local streams. The aquifers beneath RSA are some of the most productive in Madison County. (U.S. Army Missile Command, 1994)

The Arsenal has a facility wide National Pollutant Discharge Elimination System (NPDES) Permit.

4.0 ENVIRONMENTAL CONSEQUENCES

Federal environmental laws and regulations were reviewed to determine established thresholds for assessing environmental impacts (if any) under NEPA. Proposed activities were evaluated for their potential to result in significant environmental consequences based on the interpretation of significance outlined in the CEQ regulations for implementing the procedural provisions of NEPA (40 CFR 1500-1508) and AR 200-2, *Environmental Effects of Army Actions*.

CEQ Guidelines (40 CFR 1508.27) specify that significance should be determined in relationship to both context and intensity (severity). Three levels of impact can be identified:

- No Impact - No impact is predicted.
- No Significant Impact - An impact is predicted, but the impact does not meet the intensity/context significance criteria for the specific resource.
- Significant Impact - An impact is predicted that meets the intensity/context significance criteria for the specific resource.

Sections 4.1 through 4.11 describe expected impacts to the environment from the Proposed Action and the No-Action Alternative and potential mitigation measures. The amount of detail presented in each section is proportional to the potential for impacts.

4.1 AIR QUALITY

Regulatory Applicability

The proposed demolition of buildings at RSA by conventional means would not generate emissions of criteria pollutants or hazardous air pollutants. Some of the buildings contain ACM and/or lead-based paint. ACM would be removed from the buildings prior to demolition.

The NESHAP for asbestos is published in 40 CFR 61 Subpart M. It is applicable to the removal of Regulated ACM (RACM). Per Subpart M, RACM is defined as (a) friable asbestos material, (b) Category I non-friable asbestos-containing material (ACM) that has become friable, (c) Category I non-friable ACM that will be or has been subjected to sanding, grinding, cutting, or abrading, or (d) Category II non-friable ACM that has a high probability of becoming or has become crumbled, pulverized, or reduced to powder by the forces expected to act on the material in the course of demolition or renovation operations. The type of RACM material present at any structure can be determined by the test method specified in 40 CFR Part 763, Subpart E, Appendix E, Section 1, *Polarized Light Microscopy*.

The standards for demolition and renovation of buildings containing asbestos are located in Section 61.145 of Subpart M. To determine specific requirements of the standard which apply to a facility and prior to the commencement of demolition, the demolition area must be inspected for the presence of asbestos, including Category I and Category II non-friable ACM. For demolition operations, the standards are applicable if the combined amount of RACM to be removed is: 1) at least 80 m (260 ft) on pipes or at

least 15m^2 (160 ft^2) on other facility components, or 2) at least 1 m^3 (35 ft^3) of facility components where the length or area could not be measured previously.

If RACM is not being removed from a demolition operation, the procedures are not applicable, but notification of demolition is always required in accordance with Section 61.145(b). The asbestos NESHAP states in Section 61.145[c](1) that RACM need not be removed before demolition if: 1) it is Category I non-friable ACM that is not in poor condition and is not friable, 2) it is on a facility component that is encased in concrete or other hard material and is adequately wet whenever exposed during demolition, 3) it was not accessible for testing before demolition and was discovered after demolition began, or 4) it is Category II non-friable ACM that will not become crumbled or reduced to powder during demolition. Since the buildings will be demolished by being razed, the ACM must be removed in accordance with the work practices of Section 61.145[c].

4.1.1 Proposed Action. The buildings proposed for demolition in this EA are located throughout RSA. Buildings that possibly contain ACM would have the ACM removed and properly disposed prior to being razed by conventional demolition methods.

4.1.2 No-Action Alternative. If the No-Action Alternative were chosen, air quality would not be impacted, since no status changes in the buildings would occur. However, these buildings may advance to a state of disrepair that may cause the asbestos to become airborne, therefore posing a potential health and safety threat to the surrounding public.

4.1.3 Mitigation Measures. Demolition activities will be performed on a scheduled basis as to not exceed federal and state NAAQS concentrations. Heavy equipment vehicles would be equipped with standard pollution control devices to minimize air quality impacts.

4.2 BIOLOGICAL RESOURCES

Criteria for determining the significance of potential impacts to biological resources are based on the relative importance of the resource, the quantity of the resource that would be impacted, the sensitivity of the resource to the proposed activities, and the duration of the impact. Impacts are considered significant if they are determined to have the potential to result in reduction of the population size of federally or state listed threatened or endangered species, degradation of biologically important unique habitats, or substantial long-term loss of vegetation and the capacity of a habitat to support wildlife (i.e. negatively impact biodiversity).

Biological diversity (biodiversity), or the variety of life and its processes, is a basic property of nature that provides enormous ecological, economic, and aesthetic benefits. The loss of biodiversity is recognized as a major national, as well as global, concern with potentially profound ecological and economic consequences.

4.2.1 Proposed Action.

Vegetation - The areas currently occupied by the buildings under consideration for demolition have been in place for many years. Past activities in these areas have cleared much of the native vegetation from around the buildings. Most of the buildings are surrounded by maintained, mowed lawns, which have been mowed infrequently in the past two years. There are some scattered trees at some of the buildings proposed for demolition but no forested areas that would be impacted by demolition activities. There

would be potential short-term impacts to existing ground cover, shrubbery, and small trees located near some of the buildings proposed for demolition. Larger trees located near any of the buildings considered for demolition would be protected during demolition and earth moving activities. Language to this effect would be included in the contracts issued for this project.

Fish and Wildlife - As stated in Section 3.2, a variety of wildlife species occur on Redstone Arsenal. Those species that use open lawns, pastures, and old field habitats, use areas around the buildings for forage/cover/resting habitat. Some suitable nesting/den habitat for small mammals and songbirds is also available near the abandoned buildings. Wildlife can move freely near any of the buildings proposed for demolition. However, overall wildlife productivity and diversity around the buildings, proposed for demolition, is limited by the available habitat. Species such as white-tailed deer, rabbit, other small mammals, and red-tailed hawks would typically use these areas. No fishery resources are located near any of the buildings.

There would be the potential for some short-term reduction in wildlife productivity associated with the Proposed Action. However, species diversity is low and the impacts would be of short duration. Vegetative cover would be reestablished and the areas would rapidly recover wildlife values. Therefore, there would be no significant impacts to wildlife resources. In fact, the wildlife values of many areas would be improved by the removal of buildings.

A concurrence letter from the USFWS dated August 23, 1999, for the Proposed Action, is located in Appendix A.

Threatened and Endangered Species - No federally listed or candidate species occur, nor is suitable habitat available, in the vicinity of the buildings proposed for demolition.

Wetlands - Building 5100 is located in the vicinity of a wetland area. This palustrine forested (PFO) wetland area is associated with Huntsville Spring Branch (HSB) near Gate 1, which flows across the northeast corner of Redstone Arsenal, and is located on the north side of the structure. The small structure (103 square feet), utilized as a cable vault for telecommunication lines, was constructed on a spoil pile along the north margin of Martin Road at the boundary of RSA. No impact to the nearby wetland area would be anticipated from the demolition of this structure.

Unique Habitats - The ALNHP has performed extensive surveys for unique habitats and species on RSA (ALNHP, 1995) and has identified several unique habitats. None are close to any of the buildings proposed for demolition. Based on this information it is concluded that the Proposed Action would not impact unique habitat resources at RSA.

4.2.2 No-Action Alternative. There would be no impacts to biological resources under the No-Action Alternative.

4.2.3 Mitigation Measures. Demolition contracts would be worded such that trees around buildings proposed for demolition would be protected during demolition activities. The areas would be revegetated with grasses as soon after demolition as practicable to prevent erosion. Eventually some areas would be planted with trees after consultation with the Installation Forester.

4.3 CULTURAL RESOURCES

AMCOM has conducted cultural resources studies to identify historic properties located at the Arsenal pursuant to 36 CFR paragraph 800, regulations implementing Section 106 (16 U.S.C. paragraph 470f) of the National Historic Preservation Act (NHPA) as amended through 1992 (16U.S.C. 470 *et seq*.) and Section 110 of the same (16 U.S.C. paragraph 470h-2). These studies include the following:

- *Historic Properties Report, Redstone Arsenal Alabama,* (Building Technology Inc., 1984).

- *Architectural Assessment of the World War II Military and Civilian Works, U.S. Army Aviation and Missile Command, Redstone Arsenal, Madison County, Alabama, Draft Final Report (Revised),* (Panamerican Consultants, Inc., January 1998).

- *An Architectural and Historic Inventory of Buildings and Structures Dating to the Cold War Era (1946-1989) at Redstone Arsenal, Alabama* (TRC Mariah Associates, 1997).

Neither of the latter two reports, in their entirety, has been coordinated with ALSHPO. The Panamerican WW II Final Report and the Draft TRC Mariah Cold War Report have been sent to ALSHPO by the cultural resources staff of RSA as supporting documentation for obtaining concurrence on the proposed demolition of the buildings.

Because of problems with the Cold War Report, especially the lack of development of a Cold War Context for Redstone Arsenal, the recommendations of eligibility or non-eligibility for the NRHP are in question. It is difficult to determine how the recommendations on eligibility for the NRHP were made in the TRC Mariah Cold War report. Therefore, AMCOM has contracted with Historic Resource Assessments (Mr. Elliott Kip Wright, owner and architectural historian) to develop a Cold War historic context for Redstone Arsenal and to make recommendations on buildings and structures that may be exceptionally significant under National Register (NR) Criteria Consideration G: Properties that have achieved Significance Within the Past Fifty Years. Mr. Wright has not completed his report and evaluation of Cold War era buildings that may be exceptionally significant. Mr. Wright has tentatively identified two districts:

- The U.S. Army Ordnance Missile Laboratories District with eight buildings and a period of significance from 1950-1956; and

- The U.S. Army Ballistic Missile Agency (ABMA) District with approximately 60 contributing buildings and nine non-contributing buildings. The period of significance is from 1950 to 1960.

Both of these districts were associated with the early space exploration program under the German scientist Dr. Werhner von Braun and his associates.

None of the buildings proposed for demolition in this document are included in these two proposed districts. Properties that usually do not yield evidence of exceptional significance are standard design housing units (enlisted barracks, Wherry housing, etc.), fire and police stations, gatehouses, visitor centers, general storage repositories, administration buildings, and support facilities such as sewage lifts, water filtration

systems, and heating/cooling facilities. All the above buildings fit within these categories with the exception of Building 8978.

Building 8978, a part of WW II Redstone Ordnance Plant Line 6, was determined not eligible for the NRHP in the Panamerican report. It was never used during WW II. Redstone Arsenal has also demolished two other buildings in Line 6, Buildings 8971 and 8972, through a Memorandum of Agreement (MOA) among RSA, ALSHPO, and the Advisory Council on Historic Preservation (ACHP) dated May 22, 1996. At the time that RSA consulted with ALSHPO on Buildings 8971 and 8972, determinations on their eligibility had not been made. Therefore, the ACHP recommended RSA enter into a MOA and provide documentation to preclude any loss of information on buildings potentially eligible that might occur from the demolition of the two buildings. A copy of the MOA is enclosed in Appendix A.

Phase I archaeological testing has been conducted on each of the proposed demolition sites. Information is provided below on the area around each building:

There are no eligible sites near Buildings 5105 or 5107. The areas were surveyed by University of Alabama Office of Archaeological Research. The results can be found in the *Archaeological Historical Surveys and Reports on Proposed Construction Site for BMD Headquarters and Associated Earth Borrow Areas,* September 4, 1985 by William Paul Jordan and Van D. King, Jr.

New South Associates surveyed the area around 5100 and the results can be found in *Archeological Test Excavations at the Proposed Dry Boat Storage Facility and Archeological Survey of the Neal Road Extension Corridor Redstone Arsenal, Huntsville, Alabama,* November 19, 1991. No sites were found around Building 5100. ALSHPO concurred with this report in letters dated October 18, 1991 and August 14, 1991.

Alexander Archaeological Consultants conducted a small Phase I systematic survey around Building 8978 in July 1999. No sites were found around Building 8978.

The areas around Buildings 134, 3714 and 3433 have no sites. TRC Garrow Associates, Inc surveyed these areas. The results can be found in *Phase I Archaeological Investigations of Ground Disturbance Areas 1, 2, 3, 6, 9, and 10, Redstone Arsenal, Madison County, Alabama Final Report,* September 1998 (see Figure 3 of TRC Garrow report). ALSHPO concurred on the findings in this report in letter AHC 98-0948.

An environmental assessment entitled *Environmental Assessment for the Demolition of 35 Buildings and Ancillary Structures on Redstone Arsenal,* February 1998, was coordinated with ALSHPO. Buildings 132 and 136 are similar to Building 134. Buildings 3434 and 3435 are similar to Building 3433. ALSHPO concurred with the demolition of these buildings in letter AHC 98-0450. ALSHPO has also concurred with the demolition of Building 3438, a dining facility between 3435 and 3433, in letter AHC 99-0475.

A Section 106 package has been prepared by RSA DEMP cultural resources personnel and sent to ALSHPO (August 2, 1999) for their concurrence on the buildings proposed for demolition in this document.

The proposed demolition of the buildings will involve ground disturbance to an approximate depth of six inches, in the immediate vicinity around the buildings. Because of extensive ground disturbance that occurred during the construction of these buildings, no prehistoric or historic subsurface cultural resources should be affected by this project. There are no known Native American traditional use or religious sites affected by this project. The demolition of Buildings 134, 3433, 3714, 5100, 5105, 5107, and 8978 would result in no impacts to cultural resources at RSA.

A letter from ALSHPO dated August 11, 1999 (Appendix A) indicates that Buildings 134, 3433, 3714, 5100, 5105, and 5107 are not eligible for the National Register and concurrence is given for their demolition. A telephone conversation between ALSHPO and DEMP Cultural Resources personnel (Carolene Wu) on September 20, 1999, indicated that Building 8978 was not eligible for listing on the NRHP and that demolition of this building could proceed. A letter to this effect is being forwarded to the RSA DEMP Cultural Resources office and will be located in their files for future reference.

4.3.1 Proposed Action. There would be no significant impacts expected to cultural resources under the Proposed Action. Demolition of the buildings in question can proceed if the SHPO concurs that the documentation provided to his office is adequate to mitigate any adverse effects to those buildings that the Army and the SHPO agree are eligible for the NRHP.

Demolition/destruction of the following buildings can proceed with no impacts to cultural resources and no mitigations are required.

4.3.2 No-Action Alternative. There would be no negative impacts to cultural resources under the No-Action Alternative, since there are no historic properties involved.

4.3.3 Mitigation Measures. If government or contractor personnel observe items that might have historical or archaeological significance during borrow area activities, they will report their observations immediately to the Arsenal's Cultural Resources Manager to determine their significance and any special disposition of the finds. Activities in the area of the discovery that may result in the destruction of these resources would cease and personnel would be prevented from trespassing on, removing, or otherwise damaging such resources. Language to this effect would be included in the demolition contract.

4.4 HAZARDOUS MATERIALS AND WASTE

4.4.1 Proposed Action. The Proposed Action is to demolish seven buildings in an environmentally conscientious manner. There would be no significant impacts associated with the Proposed Action. Waste materials generated from the demolition of the selected buildings, once the ACM has been removed, are not considered hazardous. The ACM would be removed in accordance with all federal, state, and local laws. All of the ACM along with the demolition debris would be disposed of following all applicable laws in the SWDF on Redstone Arsenal. The Arsenal's SWDF permit No. 45-03, issued by ADEM in December 1996, for its construction/demolition landfill (CDL) allows the disposal of up to 300-600 cubic yards per day of only inert materials such as construction and demolition debris, stumps, limbs, concrete, asphalt, asbestos, and similar type waste or material collected from RSA (ADEM 1995). According to Mr. Joel Gafnea, Demolition Manager for Tri-Star, Inc. a 1,000 square foot wooden structure would

produce approximately 180 cubic yards of debris and a 1,000 square foot masonry (concrete and brick) structure would produce approximately 140 cubic yards of debris. Total capacity of the CDL is 2,960,000 cubic yards. The CDL would have sufficient capacity to contain the demolition waste produced by the Proposed Action (Personal comm., Troy Pitts, DEMP).

4.4.2 No-Action Alternative. If the No-Action Alternative is chosen, it would require that the Army plan no demolition or reconstruction of any of the buildings selected in this Proposed Action. The buildings would remain unchanged, therefore, no impacts from demolition would occur.

4.4.3 Mitigation Measures. All demolition activities involving buildings containing ACMs will comply with MICOM Regulation 200-1, *Environmental Quality, Asbestos Control Program,* guidance. All ACM would be removed from the building proposed for demolition before demolition proceeds.

4.5 HEALTH AND SAFETY

4.5.1 Proposed Action. No significant environmental impacts to Health and Safety are expected from the demolition of the proposed buildings on RSA. Potential, not significant, impacts to Health and Safety would be minimized by applying safety procedures (which include OSHA regulations 29 CFR Parts 1910 and 1926, AR 385-100, *Safety*, EM 385-1-1, *Army Corps of Engineers Safety and Health Requirements Manual*; and the Base Operating Contractor's approved safety plan) which would be followed during demolition activities. All health and safety requirements of MICOM Regulation 200-1 regarding asbestos work operations will be complied with.

4.5.2 No-Action Alternative. The decision not to demolish the proposed buildings containing ACM and/or lead-based paint would have potentially negative impacts on health and safety. Currently, the buildings with potential ACM and/or lead-based paint issues are located throughout the Arsenal. These areas are unsecured at the present time and there would be potential liability issues should unauthorized persons enter these buildings and become exposed to hazardous materials.

4.5.3 Mitigation Measures. Due to the potential for impacts to health and safety several mitigative measures should be implemented prior to and during demolition activities. These are presented in greater detail in Chapter 5, Conclusions and Mitigations Summary.

4.6 INFRASTRUCTURE AND TRANSPORTATION

4.6.1 Proposed Action. There are no significant impacts anticipated to infrastructure and transportation under the Proposed Action. There would be an increase in building debris being taken to the Redstone Sanitary Landfill. However, the landfill has adequate capacity to handle the potential increase in building debris (see Chapter 4, Section 4.4). There are no utility requirements expected for demolition activities. There would also be a slight increase in vehicular traffic associated with the Proposed Action. The Arsenal's roadway network is expected to provide suitable access between demolition areas and the SWDF.

4.6.2 No-Action Alternative. No impacts to infrastructure and transportation would be anticipated with this alternative, since the demolition of the buildings would not occur.

4.6.3 Mitigation Measures. Since no infrastructure and transportation impacts have been identified for the Proposed Action, no mitigation measures are necessary.

4.7 LAND USE

4.7.1 Proposed Action. The Proposed Action would result in positive impacts to land use within the ROI. The most substantial change would be the removal of the buildings proposed for demolition. This would allow the existing land currently occupied by the buildings to be converted to other uses. Demolition of these abandoned buildings would help optimize land use on the Arsenal, consistent with good management practices and long-range planning goals. Another positive impact would be an enhancement of the aesthetics of the area from the removal of the deteriorated structures.

4.7.2 No-Action Alternative. There would be potential negative impacts to land use if the buildings are not demolished. Buildings would have to be maintained and secured to prevent liability issues regarding health and safety. RSA would not have the opportunity to reuse the existing locations where the buildings are located for alternative uses in the near future.

4.7.3 Mitigation Measures. No mitigation measures are anticipated for land use.

4.8 NOISE

4.8.1 Proposed Action. There would be no significant impacts anticipated from noise due to demolition activities. Normal demolition and earthmoving equipment operations would generate noise only during demolition activities, and would be of limited duration. Current building locations are not adjacent to sensitive noise receptors (such as endangered species, hospitals, and schools). All of the buildings under consideration for demolition are located in ICUZ Zone I. The limited duration of the Proposed Action in these locations and the normal ambient noise that occurs in this area would cause no significant additional noise impacts. The noise produced from these activities is anticipated to be similar to that of normal construction noise levels, see Table 4-1.

4.8.2 No Action Alternative. There would be no anticipated impacts from noise under this alternative, since no demolition activities would occur.

4.8.3 Mitigation Measures. Since no significant noise impacts have been identified under the Proposed Action, no mitigation measures are necessary.

TABLE 4-1 Typical Construction Equipment Noise Levels
(Noise Levels are in dBA @ 50 Feet)

Equipment	Noise Level (decibels)
Bulldozer	80
Front end loader	72-84
Dump truck	83-94
Jack hammer	81-98

Crane with ball	75-87
Backhoe	72-93
Scraper	80-93
Grader	80-93
Roller	73-95
Paver	86-88

Source: U.S. Air Force, 1996

4.9 GEOLOGY AND SOILS

4.9.1 Proposed Action. There would be no significant impacts anticipated to geology or soils from the Proposed Action. Best management practices for erosion control, topsoil management and revegetation would be required and stated in the demolition contract. Siltation barriers would also be required during demolition and soil/debris removal.

4.9.2 No-Action Alternative. There would be no impacts to geology or soils anticipated from the No-Action Alternative as long as the identified buildings remain intact.

4.9.3 Mitigation Measures. Erosion control measures including topsoil management and revegetation of areas that are disturbed would be required. Siltation barriers around the buildings during demolition activities would also be required and would be stated in the demolition contract.

4.10 SOCIOECONOMICS

4.10.1 Proposed Action. The Proposed Action would have a positive, though not significant impact on local socioeconomics, from the employment generated from the Proposed Action. The buildings are currently abandoned and contribute nothing to socioeconomics. Incidental positive impacts to socioeconomics associated with future construction projects would be expected and evaluated under the environmental documentation for those projects.

4.10.2 No-Action Alternative. There would no socioeconomic impacts anticipated if the buildings are not demolished.

4.10.3 Mitigation Measures. Since only positive socioeconomic impacts have been identified for the Proposed Action, no mitigation measures are anticipated.

4.11 WATER RESOURCES

4.11.1 Proposed Action. There would be potential for impacts, though not significant, to water resources due to demolition of buildings under the Proposed Action. Soils disturbed during demolition activities could possibly be washed into drainage ditches and, potentially, into RSA watercourses. Erosion control during demolition activities would be undertaken with the use of hay bales and silt fencing to prevent the movement of soils via surface waters. These procedures would be addressed in the demolition contract.

4.11.2 No-Action Alternative. If the No-Action Alternative were chosen, no demolition would take place and the existing buildings would remain as they are at present. The buildings would remain in place and threats to water resources would not occur as long as the buildings remain intact.

4.11.3 Mitigation Measures. Under the Proposed Action, erosion control methods will be used to prevent surface erosion sediments from entering any of the drainage ditches near any of the buildings. Siltation barriers placed prior to demolition activities would be required to minimize any such runoff. These procedures would be addressed in the demolition contract.

5.0 CONCLUSIONS AND MITIGATIONS SUMMARY

RSA proposes to demolish seven buildings in an environmentally conscious, consistent and effective manner. These buildings have outlived their usefulness and are in excess of Army needs. Some of the buildings may contain ACM and/or lead-based paint. The purpose of this EA was to examine the potential environmental impacts that would reasonably be anticipated if the Proposed Action were undertaken.

No significant impacts to any of the resources examined in this EA are anticipated from implementing the Proposed Action. There would be positive impacts anticipated to biological resources and land use as a result of using good management practices and long-range planning as described under the Proposed Action. A short-term positive impact to socioeconomics would also be anticipated from employment opportunities derived from implementing the Proposed Action.

Under the No-Action Alternative, the RSA would not demolish the identified buildings and they would remain in place. If this alternative were chosen the buildings would need to be maintained and secured to prevent unauthorized personnel from entering. In addition, with the No-Action Alternative potential negative impacts would be expected in several environmental resource areas. There would be potentially negative impacts to land use in the areas where the buildings are currently located if the land cannot be utilized productively. There would also be potential negative impacts to health and safety from the ACM and/or lead-based paint suspected to exist in the buildings should they be left in place with no security.

There are two important conclusions based on the evaluation in this EA. One is that conducting demolition activities on the buildings would appear to optimize planning control over land use and consequently ensure the most environmentally sound planning practices are followed. Secondly, removal of the buildings would remove potential health and safety risk issues to accommodate broad environmental and land management concerns on the Arsenal and in the surrounding area.

5.1 AIR QUALITY

Mitigative measures for this resource are that demolition activities will be performed on a scheduled basis following established SOPs as to not exceed federal and state NAAQS concentrations. Heavy equipment vehicles would be equipped with standard pollution control devices to minimize air quality impacts. Soil and demolition debris around the demolition site would be kept wet in order to keep the level of fugitive dust (particulate matter) down.

5.2 BIOLOGICAL RESOURCES

Mitigative measures for this resource would require that the Arsenal not remove large trees from around building demolition areas. The areas from which buildings are removed would be revegetated with grasses as soon after demolition as practicable to prevent erosion. Revegetation/reforestation would follow as soon as feasible, based on consultation with the Arsenal Forester. Wording in the demolition contract would ensure that these mitigations are accomplished.

5.3 CULTURAL RESOURCES

There are no mitigative measures required for the seven buildings proposed to be demolished since none are eligible for the National Register of Historic Places.

If government or contractor personnel observe items that might have historical or archaeological significance during borrow area activities, they will report their observations immediately to the Arsenal's Cultural Resources Manager to determine their significance and any special disposition of the finds. Activities in the area of the discovery that may result in the destruction of these resources would cease, the Installation Cultural Resources Manager would be notified, and personnel would be prevented from trespassing on, removing, or otherwise damaging such resources. These words would be included in the demolition contract.

5.4 HAZARDOUS MATERIALS AND WASTE

Removal of ACM would be in accordance with federal, state, and local regulations and procedures. ACM being transported to the CDL would be contained such that no ACM fibers escape into the environment.

5.5 HEALTH AND SAFETY

The following mitigation measures are recommended for the area of Health and Safety.

The contractor shall address the following potential hazards that may be encountered during site work.

- Physical, and safety hazards of concern for each site task and/or operation to be performed. A hazard/risk analysis should be performed and added to the Site Safety and Health Plan (SSHP).

- Exposure to residues from asbestos, silica, dust, lead, and PCBs.

5.6 INFRASTRUCTURE AND TRANSPORTATION

No mitigative measures have been identified or are necessary for this area.

5.7 LAND USE

No mitigative measures have been identified or are necessary for this area.

5.8 NOISE

No mitigative measures have been identified or are necessary for this area.

5.9 GEOLOGY AND SOILS

The only mitigation measure identified for these resources was for soils. The contractor will remove some soil with demolition debris. This will ensure the complete removal of ACM and/or lead-based paint residues. The Army will revegetate all demolition areas with native grasses when demolition activities are completed on individual sites. Such wording will be included in the demolition contract.

5.10 SOCIOECONOMICS

No mitigative measures have been identified or are necessary for this area.

5.11 WATER RESOURCES

Mitigative measures for this resource includes erosion control techniques to prevent soil erosion and minimize runoff of material from demolition areas. Siltation barriers will be erected prior to demolition activities where slopes could result in rapid runoff. Sites would be vegetated following demolition activities. Such wording will be included in the demolition contract.

5.12 CUMULATIVE IMPACTS

In accordance with the implementing regulations for the National Environmental Policy Act (40 CFR 1508.7), cumulative impacts must be addressed in an EA. A cumulative impact is the "…impact on the environment which results from the incremental impacts of the action when added to other past, present, and reasonably foreseeable future actions…"

The activities described for this demolition project would be accomplished in isolation. Based on the review of existing environmental documentation examined for this EA, and discussions of potential future activities planned for RSA, cumulative impacts would not be anticipated.

5.13 INDIVIDUALS/ORGANIZATIONS RESPONSIBLE FOR OBTAINING REQUIRED PERMITS/LICENSES/ENTITLEMENTS

All required permits and licenses necessary to conduct this Proposed Action would be obtained by the selected demolition contractor.

5.14 CONFLICTS WITH FEDERAL. STATE, OR LOCAL LAND USE PLANS, POLICIES, AND CONTROLS

The Proposed Action itself would have no impact on existing land use itself and presents no known conflicts with federal, regional, state, or local land use plans, policies, or controls**.**

5.15 ENERGY REQUIREMENTS AND CONSERVATION POTENTIAL

Anticipated energy demands for program activities can be accommodated**.**

5.16 NATURAL OR DEPLETABLE RESOURCE REQUIREMENTS AND CONSERVATION POTENTIAL

Other than fuels used during demolition activities, no significant use of natural or depletable resources are anticipated. Equipment and materials recovered during demolition activities may be reused or recycled.

5.17 IRREVERSIBLE OR IRRETRIEVABLE COMMITMENT OF RESOURCES

The Proposed Action would result in no permanent loss of habitats for plants and animals, no loss or impact on threatened or endangered species, and no loss of cultural resources such as archaeological or historic sites. There would be no permanent changes in land use or preclusion of development of any potential mineral resources. No irreversible or irretrievable commitment of resources has been identified.

5.18 ADVERSE ENVIRONMENTAL EFFECTS THAT CANNOT BE AVOIDED

There are no adverse environmental effects caused by the Proposed Action that cannot be avoided.

5.19 RELATIONSHIP BETWEEN SHORT-TERM USES OF THE HUMAN ENVIRONMENT AND THE MAINTENANCE AND ENHANCEMENT OF LONG-TERM PRODUCTIVITY

The productivity and future usage of the land would be improved by the demolition of vacant buildings. The land would be returned to either a more natural state or for use for other RSA activities.

5.20 FEDERAL ACTIONS TO ADDRESS ENVIRONMENTAL JUSTICE IN MINORITY POPULATIONS AND LOW-INCOME POPULATIONS

The Proposed Action would be undertaken in a manner that would not substantially affect human health or the environment. The Proposed Action would also be conducted in a manner that would not exclude persons from participation in, deny persons the benefits of, or subject persons to discrimination under, the program actions because of their race, color, or national origin.

5.21 CONDITIONS NORMALLY REQUIRING AN ENVIRONMENTAL IMPACT STATEMENT

The potential impacts arising from the demolition of buildings on RSA were evaluated specifically in the context of the criteria for actions requiring an Environmental Impact Statement, described in DOD Directive 6050.1, *Environmental Effects in the United States of Department of Defense Actions* (U.S. Department of Defense 1979), and AR 200-2, *Environmental Effects of Army Actions* (U.S. Department of the Army 1988).

Specifically, the proposed project activities were evaluated for their potential to:

- significantly affect environmental quality or public health and safety;
- significantly affect historic or archaeological resources, public parks and recreation areas, wildlife refuge or wilderness areas, wild and scenic rivers, or aquifers;
- adversely affect properties listed or meeting the criteria for listing on the National Register or the National Registry of National Landmarks;

- significantly affect prime and unique farmlands, wetlands, ecologically or culturally important areas, or other areas of unique or critical environmental concern;
- result in significant and uncertain environmental effects or unique or unknown environmental risks;
- significantly affect a species or habitat listed or proposed for listing on the federal list of endangered or threatened species;
- establish a precedent for future actions;
- adversely interact with other actions resulting in cumulative environmental effects; and
- involve the use, transportation, storage, and disposal of hazardous or toxic materials that may have significant environmental impact.

No conditions were discovered during the analysis of this Proposed Action that would necessitate an environmental impact statement.

5.22 PUBLIC INVOLVEMENT

There is a 30-day comment period after the Notice of Availability of the Supplemental Environmental Assessment for the demolition of buildings on Redstone Arsenal, Alabama is published in the local newspaper. Other federal, state, and local agencies are not currently involved in the planning of this action.

There were no significant environmental issues determined through this EA process. All issues raised during the scope of the process have been identified within this assessment.

6.0 LIST OF PREPARERS

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7.0 INDIVIDUALS/AGENCIES CONSULTED

7.1 AGENCIES/ORGANIZATIONS SENT COPIES OF THE ASSESSMENT

As part of the CEQ Regulations on the National Environmental Policy Act, the U.S. Army Aviation and Missile Command is circulating the Supplemental Environmental Assessment for the demolition of buildings on RSA to the following agencies, organizations, and individuals:

Alabama State Historic Preservation Office, Montgomery, Alabama

U.S. Environmental Protection Agency, Office of Environmental Assessment, Atlanta, Georgia

U.S. Fish and Wildlife Service, Daphne, Alabama

7.2 INDIVIDUALS AND AGENCIES CONTRIBUTING TO THE PROJECT

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8.0 REFERENCES

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APPENDIX A